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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,944

05/08/2006

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5157

490 7590 02/03/2009  
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EXAMINER

MULCAHY, PETER D

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

02/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,944	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Peter D. Mulcahy	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrell et al. US 4,839,412 alone or in view of Hall US 6,025,422.

3. The rejection set forth under 35 USC 103 in the paper mailed 6/26/08 is deemed proper and is herein repeated. The newly amended claims and remarks filed in support thereof have been fully considered but have been found not persuasive.

4. With respect to the Harrell et al. patent, applicant argues that the polymer component relied upon by the examiner so as to render obvious the claimed terpolymer, is an optionally incorporated graft polymer. Applicants allege that the optional nature of the incorporation does not render obvious the substitution of this component for either (a) or (b) but rather the use of the polymer in addition to the claimed polymers. This is not persuasive. The claims do not exclude the polymeric components disclosed in the art and are open to all other components.

5. It is then argued that the terpolymer as claimed is not rendered obvious by the graft polymer disclosed in the art. This is not persuasive. The term "terpolymer" is seen to define the polymer as having three distinct monomeric species. The term "terpolymer" does not limit the structure of the polymer. This is to say that a graft

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polymer having three distinct monomeric species is a "terpolymer". Further, it is improper to read limitations from the specification into the claims. The claimed relative amounts of the monomeric species and resin components are seen to be conventional and rendered obvious by the knowledge generally available to one having ordinary skill in the art.

6. The Hall patent is cited as showing the claimed terpolymer functioning as a coupling agent for polyethylene and ethylene copolymers. Once again, applicants argue that the art describes the component as optional. This is not persuasive. Optional ingredients are clearly suggested and their incorporation is *prima facie* obvious.

7. Hall clearly directs one to the ethylene/acrylic ester/maleic anhydride terpolymer. The polymeric coupling agent is described at column 6 lines 53+. Here a polymer comprised of olefinic terpolymers is described. The incorporation of a highly polar functional monomer is suggested and maleic anhydride is expressly identified at column 6 lines 59 and 60. The highly polar functional monomer is to be polymerized with the ethylene and the ester. The art identifies a commercial product suitable for the polymeric coupling agent as ATX325 from Exxon. The fact that this terpolymer uses acrylic acid as the highly polar functional monomer does not negate the obviousness of the maleic anhydride. The patent lists three suitable highly polar functional monomers, acrylic acid, methacrylic acid and maleic anhydride. One of ordinary skill is directed to one of the three. The specific mention of the acrylic acid does not render maleic anhydride unobvious.

8. Applicant's allegations of unexpected results and the showing in the specification has been fully considered. There are no results commensurate in scope with the claimed invention that compares the closest prior art. As such, the showing is insufficient so as to rebut the prima facie case set forth herein.

9.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter D. Mulcahy whose telephone number is 571-272-1107. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter D. Mulcahy/  
Primary Examiner, Art Unit 1796